

AMENDMENTS TO THE CLAIMS

1. (Original) A heterogeneous ruthenium catalyst comprising silicon dioxide as support material, wherein the catalyst surface comprises alkaline earth metal ions (M^{2+}) and the alkaline earth metal ions (M^{2+}) are introduced into the catalyst surface by impregnating a preliminary heterogeneous ruthenium catalyst with a solution of an alkaline earth metal(II) salt.

2. (Original) The ruthenium catalyst according to claim 1, wherein the catalyst surface comprises magnesium ions (Mg^{2+}).

3. (Currently amended) The ruthenium catalyst according to claim 1 ~~or 2~~, wherein the catalyst comprises from 0.1 to 10% by weight of ruthenium and the catalyst surface comprises from 0.01 to 1% by weight of the alkaline earth metal ion(s) (M^{2+}), in each case based on the weight of the silicon dioxide support material.

4. (Currently amended) The ruthenium catalyst according to claim 1 ~~or 2~~, wherein the catalyst comprises from 0.2 to 5% by weight of ruthenium and the catalyst surface comprises from 0.05 to 0.5% by weight of the alkaline earth metal ion(s) (M^{2+}), in each case based on the weight of the silicon dioxide support material.

5. (Currently amended) The ruthenium catalyst according to ~~any of the preceding claims~~ claim 1, wherein the catalyst is produced by single or multiple impregnation of the support material with a solution of a ruthenium(III) salt, drying and reduction.

6. (Currently amended) The ruthenium catalyst according to ~~the preceding claim~~ claim 1, wherein the solution of an alkaline earth metal(II) salt is an aqueous solution of magnesium nitrate or calcium nitrate.

7. (Currently amended) The ruthenium catalyst according to ~~any of the preceding claims~~ claim 1, wherein the support material based on amorphous silicon dioxide has a BET surface area (in accordance with DIN 66131) ~~in the range~~ from 30 to 700 m²/g.

8. (Currently amended) The ruthenium catalyst according to ~~any of the preceding claims~~ claim 1, wherein the catalyst comprises less than 0.05% by weight of halide (~~as~~ determined by ion chromatography), based on the total weight of the catalyst.

9. (Currently amended) The ruthenium catalyst according to ~~any of the preceding claims~~ claim 1, wherein the ruthenium is concentrated as a shell at the catalyst surface.

10. (Currently amended) The ruthenium catalyst according to ~~the preceding~~ claim 9, wherein the ruthenium in the shell is partially or fully crystalline.

11. (Currently amended) The ruthenium catalyst according to ~~any of the preceding claims~~ claim 1, wherein the alkaline earth metal ~~ion(s) is/are~~ ions are highly dispersed in the catalyst surface.

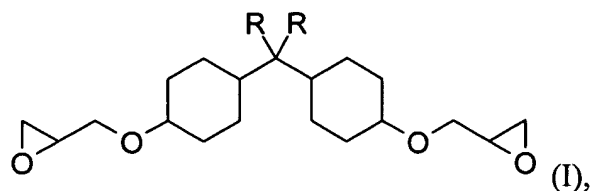
12. (Currently amended) The heterogeneous ruthenium catalyst according to ~~any of the preceding claims~~ claim 1, wherein the percentage ratio of the signal intensities of the Q₂ and Q₃ structures Q₂/Q₃ in the silicon dioxide support material determined by means of solid-state ²⁹Si-NMR is less than 25.

13. (Currently amended) The ruthenium catalyst according to ~~any of the preceding claims~~ claim 1, wherein the total concentration of Al(III) and Fe(II and/or III) in the silicon dioxide support material is less than 300 ppm by weight.

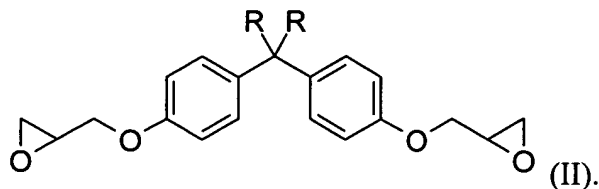
14. (Currently amended) A process for hydrogenating a carbocyclic aromatic group to form the corresponding carbocyclic aliphatic group, ~~wherein a~~ comprising contacting the carbocyclic aromatic group with a heterogeneous ruthenium catalyst, according to any of claims 1 to 13 is used wherein the catalyst comprises silicon dioxide as support material, and the catalyst surface comprises alkaline earth metal ions (M²⁺) and the alkaline earth metal ions (M²⁺) are introduced into the catalyst surface by impregnating a preliminary heterogeneous ruthenium catalyst with a solution of an alkaline earth metal(II) salt.

15. (Currently amended) The process according to ~~the preceding claim for hydrogenating claim 14, wherein the carbocyclic aromatic group is a benzene ring to form~~ the corresponding carbocyclic 6-membered ring.

16. (Currently amended) The process as claimed in ~~either of the two preceding claims claim 15~~ for preparing a bisglycidyl ether of the formula I



where R is CH₃ or H, by ring hydrogenation of the corresponding aromatic bisglycidyl ether of the formula II



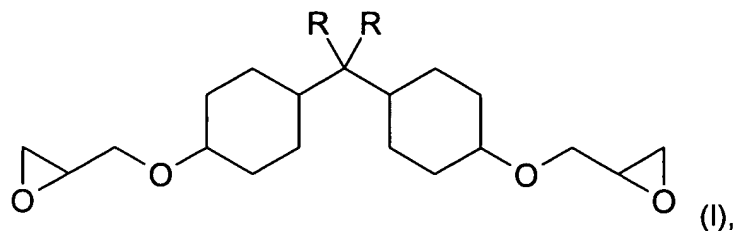
17. (Currently amended) The process according to claim 16, wherein the aromatic bisglycidyl ether of the formula II ~~which is used~~ has a content of corresponding oligomeric bisglycidyl ethers of less than 10% by weight.

18. (Currently amended) The process according to claim 16, wherein the aromatic bisglycidyl ether of the formula II ~~which is used~~ has a content of corresponding oligomeric bisglycidyl ethers of less than 5% by weight.

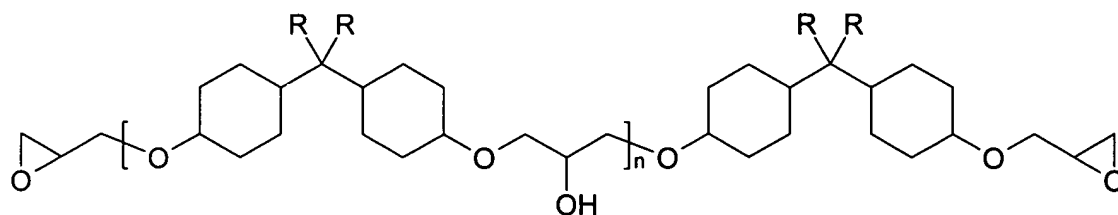
19. (Currently amended) The process according to ~~either of the two preceding claims claim 18, wherein the oligomeric bisglycidyl ethers have a molecular weight in the range~~ from 568 to 1338 g/mol for R = H and a molecular weight ~~in the range~~ from 624 to 1478 g/mol for R = CH₃.

20. (Currently amended) The process according to ~~any of claims 14 to 19~~ claim 14, wherein the hydrogenation is ~~carried out~~ conducted at a temperature ~~in the range~~ from 30 to 200°C.
21. (Currently amended) The process according to ~~any of claims 14 to 20~~ claim 14, wherein the hydrogenation is ~~carried out~~ conducted at absolute hydrogen pressures ~~in the range~~ from 10 to 325 bar.
22. (Currently amended) The process according to ~~any of claims 14 to 21~~ claim 14, wherein the hydrogenation is ~~carried out~~ conducted over a fixed bed of catalyst.
23. (Currently amended) The process according to ~~any of claims 14 to 21~~ claim 14, wherein the hydrogenation is ~~carried out~~ conducted in a liquid phase in which the catalyst is comprised ~~in the form~~ of a suspension.
24. (Currently amended) The process according to ~~any of claims 16 to 23~~ claim 16, wherein the aromatic bisglycidyl ether of the formula II is used as a solution in an organic solvent which is inert toward the hydrogenation with the solution comprising from 0.1 to 10% by weight, based on the solvent, of water.
25. (Currently amended) The process according to ~~any of claims 14 to 24~~ claim 14, wherein a the solution of the ~~substrate~~ aromatic bisglycidyl ether of the formula II to be hydrogenated ~~which~~ comprises alkali earth metal ions (M^{2+}) ~~is used~~.
26. (Currently amended) The process according to ~~any of claims 14 to 24~~ claim 14, wherein a the solution of the ~~substrate~~ aromatic bisglycidyl ether of the formula II to be hydrogenated ~~which~~ comprises magnesium ions (Mg^{2+}) ~~is used~~.
27. (Currently amended) The process according to ~~either of the two preceding claims~~ claim 25, wherein the alkaline earth metal ion content of the solution is from 1 to 100 ppm by weight.
28. (Currently amended) The process according to ~~claim 25 or 26~~ claim 25, wherein the alkaline earth metal ion content of the solution is from 2 to 10 ppm by weight.

29. (Currently amended) The process according to ~~any of claims 14 to 28~~ claim 27 for preparing a bisglycidyl ether of the formula I.



where R is CH₃ or H, which have a content of corresponding oligomeric ring-hydrogenated bisglycidyl ethers of the formula



where n = 1, 2, 3 or 4, of less than 10% by weight.

30. (Currently amended) The process according to ~~the preceding~~ claim 29, wherein the bisglycidyl ether of the formula I has a content of corresponding oligomeric ring-hydrogenated bisglycidyl ethers of less than 5% by weight.

31. (Original) The process according to claim 29, wherein the bisglycidyl ether of the formula I has a content of corresponding oligomeric ring-hydrogenated bisglycidyl ethers of less than 1.5% by weight.

32. (Original) The process according to claim 29, wherein the bisglycidyl ether of the formula I has a content of corresponding oligomeric ring-hydrogenated bisglycidyl ethers of less than 0.5% by weight.

33. (Currently amended) The process according to ~~any of claims 29 to 32~~ claim 29, wherein the content of oligomeric ring-hydrogenated bisglycidyl ethers is determined by heating the aromatic bisglycidyl ether for 2 hours at 200°C and for a further 2 hours at 300°C, in each case at 3 mbar.

34. (Currently amended) The process according to ~~any of claims 29 to 32~~ claim 29, wherein the content of oligomeric ring-hydrogenated bisglycidyl ethers is determined by ~~GPC measurement~~ (gel permeation chromatography[[I]]) (GPC).

35. (Currently amended) The process according to ~~the preceding~~ claim 34, wherein the content of oligomeric bisglycidyl ethers in % by area determined by GPC measurement is equated to a content in % by weight.

36. (Currently amended) The process according to ~~any of claims 29 to 35~~ claim 29, wherein the bisglycidyl ether of the formula I has a total chlorine content determined in accordance with DIN 51408 of less than 1000 ppm by weight.

37. (Currently amended) The process according to ~~any of claims 29 to 36~~ claim 29, wherein the bisglycidyl ether of the formula I has a ruthenium content determined by mass spectrometry in combination with inductively coupled plasma (ICP-MS) of less than 0.3 ppm by weight.

38. (Currently amended) The process according to ~~any of claims 29 to 37~~ claim 29, wherein the bisglycidyl ether of the formula I has a platinum-cobalt color number (APHA color number) determined in accordance with DIN ISO 6271 of less than 30.

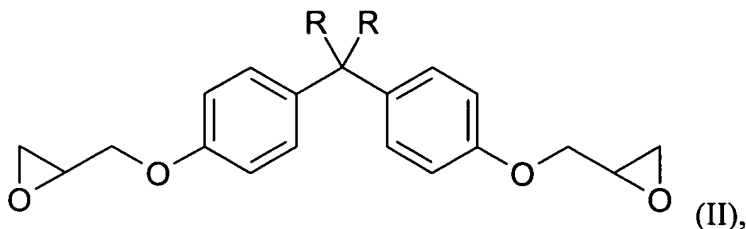
39. (Currently amended) The process according to ~~any of claims 29 to 38~~ claim 29, wherein the bisglycidyl ether of the formula I has an epoxy equivalent weight determined in accordance with the standard ASTM-D-1652-88 ~~in the range~~ from 170 to 240 g/equivalent.

40. (Currently amended) The process according to ~~any of claims 29 to 39~~ claim 29, wherein the bisglycidyl ether of the formula I has a proportion of hydrolyzable chlorine determined in accordance with DIN 53188 of less than 500 ppm by weight.

41. (Currently amended) The process according to ~~any of claims 29 to 40~~ claim 29, wherein the bisglycidyl ether of the formula I has a kinematic viscosity determined in accordance with DIN 51562 of less than 800 mm²/s at 25°C.

42. (Currently amended) The process according to ~~any of claims 29 to 41~~ claim 29, wherein the bisglycidyl ether of the formula I has a cis-cis:cis-trans:trans-trans isomer ratio in the range 44-63%:34-53%:3-22 %.

43. (Currently amended) The process according to ~~any of claims 29 to~~ claim 42, wherein the bisglycidyl ether is obtained by complete hydrogenation of the aromatic rings of a bisglycidyl ether of the formula II



where R is CH₃ or H, with the degree of hydrogenation being > 98%.